

## SALVARSAN VS. MERCURY.\*

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The experience medical science has had with mercury extends over centuries and still we do not know all about what it could do. With salvarsan we are just flirting; and while the literature on the subject has already become enormous, and while some syphilologists have had the occasion to employ the arsenobenzol in a great many cases, the experience of the most emphatic, of the most enthusiastic, and of the most eloquent supporters is limited at least in regard to time.

At present we must listen to the experience of those in whom we have faith, but each of us may be excused if he simply refuses to believe anyone but his own eyes. The results obtained are sometimes so startling that we must also excuse the early Berlin investigators who were such splendid promisers, their experience, however, must guard us against expecting too much.

Without delving into the literature and utterly disregarding other investigators' experiences I shall now simply outline what I was able to learn from the use of salvarsan in my cases.

The number treated by me is only 68, in no case was the injection given more than three times. The results were mostly good. Really excellent, almost startling results were obtained in five cases, little benefit in nine and no benefit at all in six. Out of each of these groups I shall outline one or two characteristic histories.

A saloonkeeper, 40 years old, heavy drinker, paid no attention to his infection until in the 9th week of the disease his mouth and pharynx were in a frightful condition, the patient unable to swallow anything. Then he sobered up because the liquids could not be taken by mouth any more. He was told by a customer of his saloon that he should have a Wassermann made, as that would cure him. The united efforts of the physician and of his wife, who in the meantime had developed a beautiful roseola, succeeded in persuading him that no Wassermann was necessary, and he was given an intravenous injection of salvarsan September 7, 1911, at his home, because he refused to go to a hospital. The result was almost marvelous, the symptoms on penis, skin and fauces were disappearing in a hurry, the man was able to eat on September 9th and hardly a trace of the disease was visible on the 11th. The patient so far, has not resumed heavy drinking, but managed, as the wife reported, to come home once in a while in a somewhat hilarious condition, so he did not become a teetotaler. No Wassermann was made because patient refuses, claiming he is well.

But is he?

His wife, 37 years of age, received so far, an intravenous injection of salvarsan at the beginning of the treatment, followed by 48 sublimate, 8 calomel injections, and another intravenous injection of the 606 and still has symptoms of syphilis, slight, but unmistakable clinical symptoms.

A chauffeur, 24 years old, was seen November

4, 1911, with violent secondary symptoms, received an intravenous salvarsan injection November 7th. This had a rather modest influence upon the cutaneous symptoms, a very good one, however, upon the symptoms in the pharynx. He was then given 9 weekly intramuscular injections of hydrargirum salicylicum, after which the skin cleared. He then neglected his treatment, developed again slight cutaneous symptoms, patches in the mouth, violent headaches, claimed that he had no time for treatment, was given kalium iodatum, but as symptoms did not disappear, found time to take 8 further injections of the salicylate of mercury and is clean at present.

A boy of 20, a Russian Jew, with a typical maculo-papulous syphilid (I emphasize his extraction, because we know that amongst the Russian Jews syphilis is frequently malignant, and mostly tenacious), was given March 5th an intravenous injection of salvarsan; up to March 12th the syphilid was blooming most beautifully; injections of hydrargirum salicylicum were given, patient is rapidly improving.

A blacksmith, 40 years old, with hardly perceptible symptoms of ten years old syphilis, and a strongly positive Wassermann, was given an intramuscular injection of arsenobenzol April 25, 1910; most disagreeable pains developed on the 5th day after. Patient who went to work three days after the injection, had to return to bed, and was unable to follow his occupation until the 12th day after the injection. August 4, 1911, the Wassermann was still positive (+), and August 5th he was given an intravenous injection of salvarsan. Patient thought now that he was well and did not return until February 12, 1912, when the Was-

sermann was —. February 15th he received another intravenous injection and March 11th the Wassermann was negative (—).

A waiter, 35 years old, was infected in 1905 and received thorough mercurial treatment at my hands and after our earthquake-fire, by Kreissl of Chicago to whom I referred him. March 20, 1911, he presented himself again with slight cutaneous symptoms, was given May 31, 1911, an intramuscular injection of salvarsan which disabled him from work for 3 weeks, but made all symptoms disappear. November 10th Wassermann was positive (+), 12 daily injections of sublimate were given and 6 weekly injections of salicylate of mercury. Wassermann 3 months later was negative (—).

A clerk, 42 years of age, with a complicated history of luetic troubles of many years, involving various attacks of partial paraplegia, with incontinence, aphasia, spells of stupor and hebétude, and who consulted me in 1904, was restored to usefulness by persistent calomel injections, having worked ever since the early months of 1905, was taken April 29, 1911, suddenly ill again. I saw the patient early in the morning and had him removed at once to the hospital. He was perfectly unconscious and comatose, incontinence of urine and feces, inability to swallow anything. An intra-

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muscular injection of salvarsan was given, the patient knowing nothing about it; 24 hours later he was perfectly conscious and recovered fully in a few days. He is still working. I am sure that in this case nothing but a salvarsan injection would have saved the man.

A working man, 33 years old, covered with a papulo-squamous roseola, was given an intramuscular injection of salvarsan March 21, 1911. Twelve days later the roseola was barely visible, patient was given 8 injections of calomel and 8 injections of the salicylate of mercury. No symptoms since.

A merchant, 42 years old, with a history of syphilitic symptoms for 15 years, treated by Fournier in Paris and many other noted syphilologists in Europe and this country, came to my office March 16th in a most pitiable condition. An enormous gumma of the tongue causing intense and continual pain, inability to swallow, was making life unbearable. The large doses of kalium iodatum he was taking seemed to have no influence. He claimed that he was given a subcutaneous injection of salvarsan four weeks ago, that his tongue improved considerably soon afterwards, but that he would have no more salvarsan injections. His reasons were that the pain caused by the injection lasted for weeks, was worse than that from the gumma, and the improvement in the gumma did not last longer than the pain from the injection.

The patient was placed in a hospital. The first night the pain was so intense that two hypodermic injections of  $\frac{1}{4}$  gr. of morphine brought only temporary relief. Under the influence of aspyrin and local medication the patient improved considerably and having now more confidence, submitted March 24th to an intravenous injection of salvarsan. The next 4 days the gumma seemed to be melting away, the patient became able to take various forms of food, and had very little pain. But on the 6th day after the injection the pain radiating from the gumma into the head became very intense again, and while the gumma itself was constantly improving the cervical glands did not subside and became rather more painful and more sensitive to touch. A second intravenous injection of salvarsan was given April 1st. The healing process in the gumma kept on progressing rapidly, but the cervical glands did not decrease, the patient was in constant pain. April 5th daily injections of sublimate were started. The swelling of the glands began to decrease 48 hours after the first injection and kept on doing so constantly, the pains diminished rapidly, and the patient is at present in a comfortable condition.

While my experience with the remedy may be called limited, I venture to claim the advantage that all cases, with the exception of three, who simply disappeared, were under absolute control and carefully observed, and as personal experience is for everybody the most convincing I take the liberty of drawing the following conclusions:

1. Salvarsan, used cautiously but energetically is a powerful antisyphilitic remedy.
2. The intramuscular injections are more ef-

fective and give more lasting results, but are almost impracticable on account of the frequently ensuing pain, and other bad consequences.

3. Salvarsan alone may be able to cure syphilis, it does it, however, in exceptional cases only, and even in those we very seldom can be sure of it.

4. The combination treatment, advocated at present by many investigators, also by Ehrlich himself, will in all probability shorten the time of the necessary treatment.

5. It is very hard to judge of the relative value between salvarsan and mercury. Salvarsan surely has its charms and allurements. But, plainly speaking: if I had to abandon one of the two remedies it surely would not be mercury.

### THE FALLIBILITY OF SALVARSAN.\*

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In considering salvarsan from this point of view, we do not wish to be understood as being in any manner opposed to its judicious use, or not cognizant of its efficiency as a strong therapeutic factor in the treatment of lues. The present prevailing opinion that it is not the sterilisans magna is apparently exact, in spite of the fact that an occasional case is reported as being cured by a single injection.<sup>1</sup> These few cases are substantiated by the reporters as having had a second initial sore after the lapse of from six to twelve months. These reports are not conclusive, because while we acknowledge the possibility of reinfection, the authors have not demonstrated that their cases were followed by the usual secondaries. Also we must recall that years ago Fournier<sup>2</sup> maintained that the spontaneous cure of syphilis was possible; and further, what may seem to be a typical recurrent lesion, may be only a chancre de recidive—a chancriform syphilide appearing usually at the original site of infection, or perhaps elsewhere.

Concerning the vulgar usage of salvarsan we may go to the extreme, and say that on account of its unreliability in producing definite and permanent results, and preventing even early recurrences of symptoms and lesions, it alone is a menace, because it leaves the ignorant and unwarned to exist in a false security, that may lead to their destruction. In spite of this a multitude of administrations are made daily by the regular and irregular practitioner, with the assurance in many cases, that a single injection is sufficient to cause a disappearance of any lesion and the easy conviction of the victim that he is to be entirely and forever cured.

Commercially, salvarsan is a great success. Therapeutically, its value lies in its skilled administration in chosen cases, where no contra indications exist, and lesions or symptoms present that require a rapid, intensive treatment, as a preliminary to subsequent medication by similar substance, and more than likely by mercury.

It is an exceptional instance to find a really curable case that fails to react to appropriate

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